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Cases met with among Polo Ponies.*

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Having given the matter much consideration, I have failed to hit upon any one disease or condition about which I could say enough to interest the Fellows of this Society. I have, therefore, decided to bring forward a few clinical notes on some cases met with among polo ponies. It will probably occur to some of my listeners that most of the cases I mention are the result of injuries. My remarks in this paper are chiefly in respect of polo ponies seen in London during the polo season. As the great majority of them come to London prepared for polo they are mostly in hard, sound condition, and as their work, apart from actual exercise, is done in short periods of fast and strenuous activity, it is not surprising that most of their ailments are the result of sprains or blows.

There is no doubt that the state of the ground bears a close relation to the occurrence of many kinds of lameness. Hard going appears to be mainly responsible for fractures and sesamoiditis, while heavy going is more likely to produce sprains. In this respect it is very interesting to contrast the season of 1921 with that of 1924. The former, you will probably remember was very hot and dry, and there was difficulty in getting grounds watered, partly because of restrictions on the use of water from mains, and also on account of some difficulty—which I believe was a coal strike—which made it impossible to get sufficient fuel to work pumps for obtaining the necessary water from the river and brook, which in normal times it is possible to do; consequently, the grounds became very hard, and during this season I saw nine cases of fractured pastern. This is a much larger number than I have seen in any other season, and in no case was it possible to trace the injury to the effect of a blow either from the player's own evidence or by examination of the injured part. I can also remember an exceptional number of cases of sesamoiditis during that season. The season of 1924 was exceptionally wet, and although play was greatly interfered with on account of the weather, I think the number of tournaments played was larger than ever before.

What struck me most in this season was the entire absence of fractures, and the unusual number of sprained shoulders—mostly sprains of the Mastoido-Humeralis muscle. Splints are a common cause of lameness, especially in young ponies, and are most troublesome when the going is hard, but I have formed an opinion about splints, on which I shall be very glad to have the opinion of the Fellows of this Society. It is this—that when a young pony, which has not quite finished his development, is in hard and regular work, and unexpectedly, for some reason such as bad weather—has his work restricted, he is then very liable to develop splints, particularly if highly fed while doing less work. I say this because I have noticed several cases of splint lameness arising under these conditions. Leaving my particular subject, I should like to mention that I have a similar view with regard to the formation of sidebones in young draught horses. Both, I think, are sometimes some of the evil results of regular good feeding with irregular work. Under similar conditions to those just mentioned, hæmoglobinuria is very often seen when a pony resumes fast work after resting or doing only slow work two or three days on full rations, and when it occurs in a stud where neither the owner nor groom have seen the condition before, it causes great alarm. I once saw four ponies out of a stud of six all affected at the same time and on another occasion there were three cases in a week in a stud of twelve ponies. In the former case the owner imagined that the ponies had in some way been poisoned, and in the latter case the owner appeared to feel quite certain that his animals had a contagious disease, and that I should have their urine examined. Both of them required a lot of explanation before they were satisfied. In these cases I always start treatment with ½ gr. of arecoline hypodermically and plenty of hot fomentations to the loins and hind quarters. At the same time the animal's diet is restricted to bran mashes containing sodii bicarb., and in very bad cases a bolus of four or five drams of aloes is given. Sometimes I give ½ gr. arecoline two or three times a day, until the symptoms have disappeared I find that in nearly all cases the subjects of hæmoglobinuria are mares, and have only seen one gelding with it. It appears very probable that the type of hay which the ponies have been eating may be a contributory cause. I should not like the remarks that I have just made to give any body the impression that there are a large number of polo players or grooms who do not know how to manage the feeding and exercising of their ponies. The chief difficulties are the uncertainty of our climate and the lack of grass land anywhere near the clubs where ponies can be given fast exercise when polo and practice grounds are too wet to use.

Considering the number of ponies being used in London in a normal season, and the number of times a week these ponies play, the number of accidents is

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surprisingly low. Injuries from the polo stick are quite rare, possibly because the parts most liable to injury are protected, the fore legs being covered by boots which extend from just below the knee, fit closely as far as the fetlock, and are continued down as a free bell-shaped protection for the coronet. These are held in position by means of small straps and buckles or a bandage or wide tape. Occasionally temporary lameness is caused by boots fastened with straps, through lack of care in tightening the straps, and thus getting too much pressure on one particular part of a tendon. This lameness is soon overcome by removing the pressure and stimulating circulation in the affected part. The hind legs are generally protected from just below the hock to the fetlock by means of bandages. The hind fetlocks are thus exposed to injury, and I have seen a few cases of open fetlock joint behind as a result of blows, and for this condition the best results appear to be obtained by keeping the injured joint quite dry, and frequently placing powdered quick lime on the wound from which synovia is escaping. Any synovia running down the pastern may be removed with dry cotton wool, but no attempt should be made to remove hard crusts which form until the wound is closed. Very rarely, a pony may receive a blow on the head or hock from a polo stick, but, as I have already stated, I consider injuries from this cause to be very uncommon. It is more common to see injuries resulting from the effects of one player endeavouring to ride off another player, when both are trying to reach the ball. In this way ponies sometimes bump together very severely, even in a perfectly fair ride, but sometimes there is a certain amount of misjudgment on the part of one or both the riders, and the intended "riding off" results in riding down. In either case a fairly common result is lameness due to either bruising of the supra scapular nerve in front, or bruising of the bursa at the hip joint behind. Occasionally these forms of lameness recover quickly after the use of stimulating liniments, but most of them are serious cases. The shoulder cases obtain most benefit from electrical massage, whilst simple rubbing appears to have the best effect on the cases of bursitis. In both cases, when it is desired to reduce expenses, the application of a blister, followed by a long run at grass, is resorted to, but I am a great believer in massage.

Sore backs are occasionally met with, and I do not think it is necessary to enter into details of their appearance and treatment, but it is often possible to use a pony with a sore back by placing under the saddle a thick felt numnah with a piece cut out in the region of the sore. If the piece removed from the numnah be saved, a careful saddler can replace it, and it is possible that the same numnah can be used several times for different ponies with sore places in different parts of the back. Contagious diseases are uncommon, although there is usually an outbreak of coughing at some time during the season. In one season we had a lot of trouble with ringworm, and it is well to remember that it is unsporting of a player to play a pony with this disease, on account of spreading it when "riding off" other ponies. I always point this out, but discretion may be used in proportion to the site and size of the areas affected. I think the quickest and most effective cure is obtained by using an ointment of biniodide of mercury 1—30, one application of which usually suffices to kill the fungi, but strict precautions must be taken to prevent the spreading of the disease, otherwise it will always be breaking out at odd intervals. It is well to advise that affected ponies be not groomed at all for two or three days.

Another season was remarkable for an almost universal outbreak of impetigo. Here, again, control of the disease is important. The treatment of the animals is simple. I first apply a stainless iodine ointment, rubbed into the affected areas. Next day the pony is washed all over with a disinfectant wash, and any moist spots left are dried by application of white lotion once or twice a day. I hardly ever give drenches for any condition, because the majority of polo ponies are difficult to drench, and one never knows exactly how much the animal really swallows. Most conditions can now be treated by medicines given hypodermically, in bolus, or mixed with food or drinking water, or in the form of an electuary. In giving a hypodermic injection, I never insert a needle in the skin of the neck except when using mallein to test for glanders. This is because there is continuous movement of reins on the pony's neck while he is at work, and as his neck is just as important as his mouth, any soreness in the neck might seriously affect his handiness. It may appear to be a very small point, but I daresay most practitioners have had the misfortune to see an abscess form at the seat of an hypodermic injection, and it would be very disappointing to find that a pony, having made a speedy recovery from some indisposition, was nevertheless unplayable as a result of the veterinary surgeon's needle. The site I choose is at the front of the breast, at either side of the middle line. Any thickening of skin or small abscess in this region would be no handicap to a pony otherwise fit. Having spoken in a general way, I now want to mention some particular cases which I think are of unusual interest.

1. Fractured Jaw. A six-years-old bay mare got struck in some unknown manner during a game, and was led off the ground with the left side of the lower jaw quite obviously leaning outwardly. Examination disclosed that the ramus of the mandible was completely fractured horizontally a little below the condyle, and the body of the jaw was split vertically, through the symphysis. It was quite easy to reduce the fractured parts to their normal position, but they would not remain there. This difficulty was temporarily overcome, in a rather crude manner, by firmly binding a twisted stable rubber round the lower jaw, just behind the incisor teeth, and then tying the ends of the rubber together. This had the desired effect of keeping the bones together, and the mare was led back to the stable, where the following simple operation took place. A gimlet was worked between the lateral and central incisor teeth on each

side of the jaw. Through the holes thus made a strong flexible wire—hurriedly obtained from the nearest ironmonger—was passed in such a manner that the two ends projected forward. The ends were then drawn together and twisted with pliers until the wire round the teeth became tense, and this wire was so placed that it did not rest on the gums. The twisted wire was then cut, leaving about three-quarters of an inch projecting from the junction of the two sides, the cut point was filed and bent up so as to lie in the groove between the central incisors, resting on the teeth. Care was taken to avoid the pressure of any wire upon the gums, to lessen the possibility of ulceration being caused. The binding stable rubber was then removed, and it was gratifying to see that the wire was sufficient to hold the bones firmly in position. Fearing that the bones might become displaced by the pony lying down and rolling, or rubbing her head on the manger, it was decided to keep her on pillar reins. Fortunately, the pony was of a very placid temperament, and when provided with a broad support for her chest and belly and a broad breeching stretched across the stall, she had sufficient sense to rest in these, therefore she was not actually put in slings. She was left like this for four weeks, during which time she was fed on very sloppy mashes and oatmeal gruel. Then she was put in a loose box and allowed small amounts of soft hay, given by hand. At the end of six weeks, the London season being over, the mare was taken into the country. I did not see her again that year, but she made an uneventful recovery, the wire being removed from the teeth about three months after its original application. She played polo afterwards until the war broke out, after which she was bred from.

The next case is another one of a fortunate recovery taking place largely on account of the splendidly placid temperament of the patient, who spent three months in slings without fretting or loss of appetite, and very little chafing of the skin. The diagnosis in this instance was RUPTURED SUSPENSORY LIGAMENTS IN BOTH HIND LEGS. Unfortunately, I did not see this case until about eighteen hours after the injury took place, the subject being a brown mare, about twelve years of age, and an exceptionally good pony. While playing on a Saturday afternoon on a very wet and slippery ground, this pony, according to the owner, suddenly blundered and appeared to be unable to gallop further. Being near the boards the owner dismounted and quickly took another pony. The injured pony was, with some difficulty, led back to the stables. The owner, an army officer, had to return to his station directly after the game, so he did not see the injured pony again that day. I was called the next morning (Sunday) and found the mare sweating and blowing, with a temperature of 103°, hanging her head and obviously throwing her weight forward as much as possible. Her hind fetlock joints were very swollen and sensitive to pressure, and she stood with an excessive slope to her hind pasterns. When her head was raised and she was called on to move, she moved with great difficulty and pain, and the back of her hind fetlocks nearly touched the ground. To my mind the symptoms definitely suggested ruptured suspensory ligaments, and I made a definite assertion that such was the case, although the large amount of swelling made it impossible to feel any part of the suspensory ligaments or suggest at what point the breach might be. The owner was of the opinion that, even if the mare could never be ridden again, she was at least worth trying to save as a brood mare. Consequently we set to work to see what sort of recovery could be made. The pony was brought to my yard in an ambulance, and fortunately was so quiet that she was practically carried into and out of the ambulance, and put in slings at once. The slings were pulled very high, higher, I think, than many practitioners would consider advisable, and a skilful shoeing smith was fetched. I feel sure that had not our patient been extraordinarily quiet we could never have carried out the next part of the proceedings with such welcome success. The shoeing smith took careful measurements, and as quickly as possible made a special pair of hind shoes for the mare, each being best described as a bar shoe, with a strong support running up from the centre of the bar, this support being shaped to follow the contour of the back of the hoof, the pit of the heel, the back of the fetlock and about three inches upwards from the fetlock, but it had to be made not to lie close to these parts, as room had to be left for padding, which was done with soft tow covered with fine cotton material.

Then came the difficult task of removing the old shoes and replacing them with the new ones. The slings were, temporarily, pulled still higher, and the breeching tightened: some hay was placed in a box almost on the ground to encourage the mare to keep her head down and forward; by these arrangements, with a man at the patient's head, and one at each side of her hind quarters, the shoeing smith was able to lift each hind leg in turn without causing the other leg to bear any weight, and thus the shoes were changed. The supports did not fit quite as well as I should have liked, but some of the deficiencies were overcome by arranging the padding more suitably. The slings were then lowered just enough to allow the fetlocks and heels to rest lightly on the supports. The mare's food was always placed low down to encourage her to keep her weight forward. She at once appeared to appreciate the shifting of weight from her hind legs, and soon settled down in an apparently contented state. As constantly as possible she was kept slung high for a month, during which time the only treatment to the injured limbs consisted of firm bandaging over cotton wool, with a cooling lotion frequently poured into the bandages. Occasionally the slings worked a little loose at night and had to be pulled up to their original level in the morning, but the mare never got let down to such an extent that her fetlocks had to carry a lot of weight on the supports during this month. It was then arranged to lower the slings a little for about an hour at a time three times a day. The swelling had now almost disap-

peared, but with increased pressure the fetlocks began to get sore from contact with the supports, but these sores were carefully treated and distribution of pressure arranged by careful padding, and it soon became evident that the injured parts were undergoing repair, because the mare was able to support her own weight to some extent. During the next three weeks the periods of slackening the slings were gradually increased.

A mild biniodide of mercury blister was then applied and covered with cotton wool and a firm bandage, this being left on for about another month. By this time—eleven weeks from the date of injury—the limbs were quite strong, and the mare was taken out of slings during the day and put in again at night, but she was not allowed to lie down until the shoes had been removed at the end of the twelfth week, the patient being slung high whilst the shoes were being removed. She was then left loose in a large box and led about in hand for gradually increasing periods each day. At the end of the fourth month she walked three miles to a railway station, travelled ten hours in a horse box, and then walked another seven miles to her destination. Before she was out of slings her owner decided that however good her recovery might be she should never be made to play polo again. He gave her to a friend of his to use as a hack for his wife, if possible. The mare went from me to her new owner in November, and soon started to work as a lady's hack, and in the following January the owner wrote and told me that the mare was regularly carrying a lady to hounds. She completed that season hunting, and the last I heard was that she was in foal.

The next case is in connection with a condition which is probably met with less in polo ponies than in other types of horse, *viz.*, the so-called ear fistula. I have seen many hundreds of polo ponies at close quarters, but have only seen this solitary case of ear fistula among them, although during the war I saw several of them in other types of horses during my period of service in the Army. I am, however, going into the details of this particular case because it is the only one in which I was in the fortunate position of being allowed to operate. The subject, a chestnut mare, rising six years of age, had been purchased, in the country without previous veterinary advice. The purchaser had noticed a small hole with an unpleasant discharge at the base of the pony's left ear, but was told by the vendor that the pony had recently come from Ireland, and had struck its head when entering or leaving a horse box or cattle truck. The alleged "wound" was dressed daily by the purchaser's stud groom, but, as it appeared to shew no signs of becoming healthy, when the pony came to London I was asked to see it. Examination of the so-called "wound," which was below and slightly in front of the left ear, shewed that the skin surrounding the orifice grew into the channel for a short distance and the lining of the channel was continued in the form of a smooth membrane. There was a slow but constant stream of a very offensive-smelling, slimy discharge, mixed with pus. By inserting a probe, it was found that at the bottom of the sinus there was a hard object which gave the impression of being on a firm base, but slightly movable from side to side. Searching the cavity with a fine curette produced what appeared to be a piece of decaying bone. The owner of the mare was told that the abnormal condition was, no doubt, a dentigerous cyst, the nature of which was explained to him, but in view of what he had been told when buying the mare, I thought that it was not beyond the bounds of possibility that there might have been some injury to the pony's head and that, in addition to something resembling a molar tooth, there might also be a piece of bone in the cavity. It was the material brought out of the cavity by the curette which made me suspect complications. The owner was told that the cavity would never close without a radical operation, and as he was very disinclined to let it remain as it was, he decided to play her until the end of the season, after which he instructed me to operate and to whatever I wished, and sent the pony to my yard. The cavity was washed out with an antiseptic solution as thoroughly as possible by means of a metal syringe with a long nozzle. The patient was then cast and chloroformed, and her head was kept extended on a pillow. A crucial incision was made—a vertical line and a horizontal line meeting at the opening of the cyst and the lining of the channel was removed with a small scalpel. There was not much hæmorrhage so far, and by stretching the opening thus made and washing it well, it was possible to see what appeared to be a molar tooth. This was seized with a long pair of forceps but, although it was slightly movable laterally, it was in some way firmly held in position, and for a long time resisted all attacks to remove it. After breaking a few steel instruments, I eventually succeeded in forcing a strong whelping hook behind it, and fixing a pair of scissors in the hook at the opposite end to form a handle, I succeeded after more strenuous work in removing the offending object, which is labelled No. 1 among the exhibits to be shown soon. It was obvious that this freak tooth was in a state of caries, and as further inspection of the cavity revealed no trace of detached bone, I concluded that the diseased tooth was responsible for the pus and bony-looking material procured in the curette during the first examination. But what *was* revealed in the cavity was the presence of still more large glistening lumps which looked like teeth. By this time the patient and I and everybody else connected with the operation had had enough for one day, so the wound was washed and plugged with gauze, the chloroform muzzle was removed, and the patient rose in due course. The pony did not seem at all distressed about the damage done to her head, and fed well and remained cheerful. The day following the operation the plugs were removed from the cavity, which was washed with antiseptics and replugged, and covered with a curtain which was hung from the pony's ears. This was done for about five weeks, during which time it was quite easy to see the tooth-like lumps, and to keep the wound healthy, but the cavity showed no signs of closing. The pony was then cast again

and chloroformed, and a further effort made to remove the contents of the cyst. It was again very tiring and prolonged work, but not without result, as two masses of tooth-like material were extracted, each being much larger than the piece procured five weeks previously.

These I have labelled No. 2 and No. 3, to denote the order in which they followed the first one. No. 2 appears to be very irregular, although there is some slight resemblance to a molar tooth. No. 3 seems to be composed of three objects, each resembling a molar tooth in course of develpment, the three pieces being at present fused together. I should like to have the opinion of the Fellows present to-night, as to whether they think that these pieces would have separated if development had been allowed to go on—remembering the mare to be rising six years of age—and whether they consider No. 2 to represent only one tooth. In any case, I think that this collection represents at least five molar teeth.

The chloroform muzzle was removed, and the patient eventually rose and went on in much the same manner as after the previous operation. The wall of the cavity now appeared fresh and healthy, and showed signs of closing rapidly, but at the end of another three weeks I still felt uncertain as to whether something still remained which ought to be removed. The mare was again cast and chloroformed and the cavity was explored, but it appeared to be closing so nicely that I did not feel inclined to interfere and did no more to it, particularly as there was now no sign of any unpleasant discharge. Granulation continued, and the gap had filled up and almost skinned over in a month, and the mare was sent back to her owner. I was very anxious to keep in touch with this pony, and hoped that in due course I should be able to get possession of her skull after death, but I was unlucky. The owner decided to sell all his ponies instead of wintering them. The chestnut mare was sold to a dealer whom I tracked, and I obtained a promise from him to let me know the next purchaser of the mare. Unfortunately this man died during the winter, and I did not hear of his death until sometime after he was buried, and I was then unable to trace the pony in which I was interested.

There is one more interesting point which may, or may not, be connected with the removal of these teeth. Before the operation, both in her own stable and in mine, this mare was rather vicious, and would frequently kick in a mean sort of way when she thought one was not on guard, but for the last month which she spent with us she was very placid and gentle and shewed no vice. This may have been on account of her getting very quietly handled, except at operation time, and always by the same man. Nevertheless, the change was very marked. I think it will not be out of place to quote some remarks relating to the origin of these cysts, which I have gathered from Dollar's *Regional Veterinary Surgery and Operative Technique*, in which it is stated that "the phenomenon must be referred to the development of embroyonic arches and clefts. Sometimes the lateral plates of these visceral cavities are ruptured and remain so, thus giving rise to fissures in the ear, pharynx, œsophagus, and neck, whilst partial persistence of the unruptured embryonic furrows produces blind sacs and dermoid cysts. The dental furrow which occurs in this portion of the embryonic apparatus results from a primitive fold of the buccal epithelium which, as in the jaw, can produce enamel. The teeth are oftenest found in the squamous portion of the malar bone. Several, *i.e.*, from two to four may be present; they resemble molars. Sometimes a sinus alone is present, and the tooth wanting."

Discussion.

Major Rees-Mogg: It is my pleasant duty to congratulate Captain Wright very much on his most interesting paper. He has the privilege of being veterinary officer to the owners of some of the most valuable ponies in the world.

On the first page he says the grounds were very hard in 1921, and that during that season he saw nine cases of fractured pastern. One would expect that, during the five years I was in India, where the grounds are much harder than they are at home, this particular injury would be common, arguing from Capt. Wrights' evidence, but I never saw a single case. Of course, the Arab has far stronger bones than the English animal, and I may say, further, that I hardly ever saw a case of ringbone or spavin in them. Captain Wright also speaks of the unusual number of sprained shoulders. Sprained shoulder undoubtedly does occur, but I find it hard to tell if it is a sprain or if it is a bruise. With regard to hœmoglobinuria, I have only had one case in England and that also was a mare. Concerning injuries from a stick, I have only seen one fracture from that cause and that was a fracture of the tibia—a direct result of the hit. I have also met with eye-ball injuries attributable to the stick. I must congratulate the essayist on his very successful operations for a fractured jaw, rupture of the suspensory ligament and fistula of the ear. I think he might have mentioned a little more about ringbone, spavin and ostitis, which are all fairly common and also, occasionally, curb. I think one of the most difficult decisions one has to make is in regard to the answer to be given when you are faced with a pony with the most awful legs, but of great value, and the question: "Do you advise me to buy that pony?" One has to consider many factors besides that of the actual condition of the legs in relation to soundness. In India we had the expression "polo sound," which used to save a lot of trouble later on.

Sir John Moore: I must congratulate Captain Wright on his excellent paper, and particularly upon his three cases and the wonderful manner in which he brought about recovery. Major Rees-Mogg mentioned about not having seen fractured pasterns in India That is quite true; I do not remember ever having seen one myself. But in that country, with its very hard going, there is one form of ostitis which is very common, and that is swollen fetlocks—a form of unsoundness usually known as "polo fetlocks."

It is absolutely impossible to give certificates of soundness in polo ponies and you can only describe the disabilities of the pony and advise in the best possible manner. Sometimes the term " polo sound " does not cover it. The question of splints was mentioned. I remember a very well bred mare, only four years old, which came over from Australia. She galloped a hundred yards or so along a hard road and she developed enormous splints directly afterwards. They diminished considerably after a time but were sufficient to make her go lame for a long period.

General Moore concluded by apologising for his absence at the previous meeting of the Society, and contributed some observations which he would have made on that occasion, when Captain Slocock, one of his officers in France, presented a paper on " Serum Immunity."

Mr. SHEATHER: Since the subject of soundness in polo ponies has been introduced, I think one might say that it would be as well to be guided, in advising the purchase of a particular pony, not by one's first view of the animal, but by one's experience in riding it, and this should be obtained. The majority of the best ponies are technically unsound, but if after riding and galloping they become lissom in their action, I should advise my client to buy them.

Mr. J. WILLETT congratulated the essayist and continued: I was rather surprised, as was Major Rees-Mogg, that he omitted arthritis and ostitis of the fetlocks as a cause of severe disability during the polo season, for I think it is one of the greatest. Captain Wright also omitted navicular disease, which is very prevalent in polo ponies. I am with him altogether in regard to the benefits of massage. The difficulty of advising purchase, which has been mentioned, is a very real one; my greatest difficulty is to put a price on the animals. When you ar requested to go to Tattersall's and put a valuation on a pony, it is simply asking for trouble: if he pulls out lame, and one does not know his playing capacity, one often loses a good pony through not feeling justified in taking a risk.

Mr. BALLS: I should have liked to have heard a few remarks with reference to the shoeing of polo ponies. I would suggest that if they are good footed ponies, you put Charlier shoes on in front and with calkins behind, you would save a lot of damage. Captain Wright did not mention about slinging in hæmoglobinuria. I also wonder if he has tried cold water treatment for open joint. In Egypt fractured pasterns were fairly common; I saw several due to damage with the polo stick. I rode a pony in Cairo, a wonderful black, which was sold privately afterwards, when the veterinary officer had unnerved the pony by plantar neurectomy.

Mr. W. S. KING: I think you explained the condition of splints as occurring in animals with forced feeding and irregular work. That is not my experience in regard to the heavier breeds. I have under observation forty show Shire geldings in show preparation; there are six over a ton in weight, and most of them have not got splints. The same is applicable as regards the production of side bones, which I believe are either of hereditary predisposition or traumatic. I agree with Mr. Balls about the employment of slings in the treatment of hæmoglobinuria. We find, in cart horse practice, that it is not so much a question of medicinal agents as it is of keeping the animal on its legs if possible. We make it a practice, if it is a very severe case, of slinging him first, and if that is difficult, we plait his tail and support him with a pulley to steady him, as it were. Of course, at times we meet cases which are totally unable to maintain the standing position; then we have to lower them. I also agree with him in regard to the site of intradermic medication, whether it is in polo ponies or cart horses. Captain Wright referred to the treatment of ringworm by the local application of 1—30 liq. biniod. I use a preparation S one part to ol. rapii four parts, lightly dressed all over, which means that we have to lose the animal for three days. I agree with Major Rees-Mogg that ring bone, ostitis and spavin must be exceedingly common in polo ponies, as we so often meet with these conditions even in slow work.

Mr. LIVESEY: Capt. Wright referred in his paper to the infrequency of accidents from sticks in polo. I can remember years ago, when I was a student, practically all my time was, for two years, taken up with polo ponies at Ranelagh. In one season we had two remarkable accidents. A pony received a blow from the ball or a stick right on the trachea, and the first, second and third rings below the larynx were broken—the first in two and the second in three places. One could easily press the trachea in with one's fingers. The pony coughed a little, and there was a little swelling afterwards, but nothing serious followed, and in three weeks it was quite all right. It seemed a remarkable thing that the blow should have come so directly in front as to break the rings. Another case in the same season was a longitudinal fracture of the os calcis—one of the very few cases on record. That pony also was hit during a game. It went down, and great trouble was experienced in getting it back to the stable. The fracture was diagnosed, the pony destroyed, and the bones boiled out. I believe they are now at the " Dick " College.

Mr. J. W. MCINTOSH congratulated Captain Wright on his three specifically mentioned cases, and proceeded: The essayist referred to diseases of bone, and attributed feeding as a contributory cause of a great many, and with that I heartily agree. I think that feeding has an influence on the bony framework, particularly in young horses, and unless the food contains the proper constituents diseases of bone are liable to occur. Concerning azoturia, Captain Wright must have been dealing with cases of a much more simple character than we frequently find in heavy horse practice. If you can get the horse to take to the slings it is all very well, and probably very useful, but we get any number which we cannot sling. I have not found azoturia a simple disease to treat. The majority go the wrong way.

Another matter to which reference was made in the general review of diseases affecting polo ponies was bursal enlargements. My experience of bursal enlargements has been very different from Captain Wright's. I find they are very difficult indeed to get rid of, and that the application of the most vigorous treatment is very frequently unsuccessful.

Mr. ROWE expressed his great interest in the case of ear fistula from which the three concretions were removed, and instanced a remarkable occurrence in which operation upon a parotid abscess resulted in the removal of several bony masses. This case was presented by him to that Society some fifty years ago. The horse had been treated, and lanced, for strangles, and with the pus were yielded some 14 or more cube-shaped ossifications of the parotid gland, one of which he had in his possession till very recently.

Capt. KIRK: The essayist made reference to the possibility of using a pony with a sore back by placing under the saddle a thick felt numnah with a piece cut out from the region of the sore. That is not a very reliable method. In France I always used to try to procure a piece of fresh sheep skin, and the animals used to get along very well with that. The question of ringworm has also been touched upon, and Mr. Sheather has told as that it is easily curable, three days being about the limit. While I was stationed in Kent we had an outbreak, and we could not stop the horses in the battery from getting ringworm all over. It was thought at the time to be Canadian ringworm, and it lasted two months in spite of every treatment.

Mr. WINTER: With reference to the remarks as to splints and bony growths, I find that idleness does more to develop a splint than anything else. I believe they want exercise. I have seen a lot of azoturia, and all the cases I can remember have been in waves. We find that gangrenous dermatitis of the fetlocks yields more readily to petrol and quicklime than to anything else. I got hind leg splints made for a horse with split pasterns, and she reared her foal and came perfectly sound. The pastern and fetlock were properly padded and bandaged, and the mare practically stood on the support. In doubtful cases of splints I say "the horse is unsound and I think you ought to bind them." With reference to open joint, keep the horse in a tub with cold water going all the time.

THE REPLY.

Capt. WRIGHT: I really feel that everybody has been very kind to me to-night in my first experience in public. In regard to Major Rees-Mogg's remarks, I must thank him for the high compliment he paid me, but I feel that the best compliment is that the paper has produced no little discussion. Major Rees-Mogg says he has not met with any fractured pasterns amongst polo ponies in India. Possibly by far the greater number of ponies there are ponies which are bred there, and, as he says, the Arabs appear to have much harder bone than English horses. He mentioned the difficulty of detecting the difference between a strained and a bruised shoulder. In the case of a bruise, pain is shown on pressing the region of the shoulder, whereas you are not so likely to get that in strain, while in the latter pain is much more evident in trying to move the shoulder about. With regard to injuries from the stick, I know that ponies do get injured with the stick, but my point is that in view of the number of matches played the number of injuries is extraordinarily few. Major Rees-Mogg mentioned cases where the tibia and also the eyeball have been struck. I have never seen cases of an injured eyeball which might be attributed to a blow from a stick, but I have seen several torn eye-lids, caused by part of an opponent's pony's bridle when riding off. In the latter, I always think the best thing to do is to cut the torn piece off, as suturing is seldom successful unless there is a wide strip. I have seen the numnah with holes cut, and used with great success in cases of sore back. It is necessary to make a big hole so that there may be a large area around the sore where there is no pressure. Major Rees-Mogg mentioned ringbone, spavin, ostitis, and curb. Ringbone and spavin are very uncommon in polo ponies; ostitis one gets quite frequently, if you speak of the ordinary sore shins, which are probably more a periostitis. I do not think it is common in other regions, except in the sesamoid bones. In the last five years I have only seen two cases of lameness caused by curb. With regard to the examination of ponies, of course that is a big subject, and for that reason I thought I would not bring it into this paper. Concerning horses which obviously look unsound, one can only safely advise their purchase when one has a personal knowledge of the quality of the animals. It is really surprising to see what they can do when they have got a large number of unsound parts in their limbs.

Sir John Moore, like everybody else, has paid me a lot of compliments, for which I am very grateful. He mentions that, as far as he is aware, fractured pasterns are not common in India, but they get a good many cases of ostitis of the fetlock joint. The importance of this affection depends upon where the ostitis occurs. Argentine ponies often get a bony enlargement on the front of the fetlock joint, and sometimes the ostitis spreads right across the joint. But those ponies are often able to gallop quite well, although they trot badly. I agree that, in examining a pony, one should state all the defects and then give an opinion as to whether the animal is suitable for purchase. I quite agree with what Mr. Sheather says as to the advisability of riding the ponies. I should like to mention that I have a pony only six years old, and he has an enlarged fetlock with a big lump of bone towards the front at each side. The pony walks sound, trots very lame, and canters and gallops quite easily. I do not think he suffers any pain at all. Mr. Willett spoke of ostitis and arthritis of the fetlock. I do not think these conditions are common in polo ponies, but we must always bear in mind the exception of sesamoiditis. Navicular disease occurs fairly frefrequently. I do not think it is possible for anybody

to put a value on a pony unless he is able to play it in a game, and also he must know what sort of pony suits the man who is going to buy. It is rather with regret that I have to refer to this: there is no doubt that there are many traps set for the veterinary surgeon who has to examine polo ponies when they are going to be sold, and one has to be very wary. Mr. Balls mentioned shoeing polo ponies. I was really dealing only with veterinary cases, but the shoeing is very important: it needs very skilful farriers to make and fit the shoe. A very useful shoe is a non-slip made out of a piece of thin iron. The inner edge is turned in, so that as the pony gallops part sinks into the ground. That keeps a good foothold, but is often the cause of injuries from treads. Calkins are almost invariably used behind and occasionally in front, although it is against rules to use them in front.

I always resort to slinging in hæmoglobinuria to get the animals up, but, as Mr. McIntosh remarks, it is often impossible to keep them in slings. I use hot fomentations to get the circulation in the smaller blood vessels going again. It is difficult to say definitely whether fractured pastern is due to blows, but if it were, one would expect to find some sign of external injury on the skin. Mr. King mentioned about splints. I have not had much experience in heavy breeds, but I do not think that, under any conditions, heavy horses get splints to the same extent as do the finer legged horses. I think the great cause of the trouble is high feeding and irregular exercise. I am grateful to Mr. King for his remarks about ringworm, and I must give his dressing a trial. Mr. Livesey mentioned two very interesting cases but, as he says, they were unusual ones—and that is my point, that injuries from the stick are uncommon. I am glad Mr. McIntosh agrees with me that feeding has a lot to do with disease of bone, but I still maintain that irregular exercise is half the trouble. He referred to bursal enlargements due to blows. The bursitis of which I am speaking in particular is that of the hip joint, and massage is the only thing that seems to have any effect upon it. I have never seen a case of bursitis of the stifle joint. I was interested in Mr. Rowe's remarks with regard to the parotid abscess and the bones that were obtained from it. Capt. Kirk is also inclined to think that the numnah with the hole cut in it is not very reliable. The pony is not, however, kept saddled for very long. I agree with him that the use of sheep-skin is quite good in those cases. I think one of the most important things in ringworm is to stop grooming, because the disease is no doubt spread by the grooming tools from one spot to another. Mr. Winter made some interesting remarks about splints and bony growths. He agrees that idleness does tend to help the formation of splints. I agree with him that young animals forming splints are better at exercise, provided they are kept on something soft. The use of quicklime for necrosis of the coronet is very interesting. I have seen a shoe like that described by Mr. Winter made for a split pastern, and I was told it was very successful.

Canine Distemper.

By W. M. Scott, F.R.C.V.S.,
Bridgwater.

The very instructive and masterly paper written by Mr. Livesey, and presented at the Aberdeen meeting of the "National," raises many important points. Added to these, those of us who were unable to attend the meeting have now the advantage of the views of gentlemen who took part in the discussion. The paper and the discussion give food for earnest thought which might well be carried on further in the pages of the *Veterinary Record*, for it is obvious that the more views we can bring together on this complex disease the greater will be the illumination in the dark corners of this baffling affection. In the hope of stimulating others to express their views, I append some observations on the points raised, but be it understood, not in any spirit of dogmatism, for it must be conceded that whatever data we bring forward must, by reason of our ignorance, be largely hypothetical.

Mr. Livesey lays much stress on the diagnostic value of cutaneous eruptions, and I think he is greatly justified in doing so, although I would not like to go so far as to say one can detect them as often as he appears to have done. One must admit, however, that the exanthema in some cases is so slight and so transitory that detection is difficult, and this may account for the diverse views held.

The essayist holds that oral infection is the order of things, and perhaps he is right, but I incline to the view of Mr. Kirk that inhalation should not be overlooked. I cannot subscribe to the view expressed, however, that infection *per orem* leads to the gastro-intesinal phase, and *per nasum* to the respiratory. I will enlarge on this later on. Mr. Livesey has had good results from prophylactic oral disinfection; why not, at the same time, treat the nasal apparatus?

He raises the interesting point of pre-natal infection, and I must confess such a proposition has never occurred to me, but I may say that for the last ten or twelve years I have actively immunized pregnant bitches with the object of conferring immunity on the offspring with what appeared to be in some cases absolute and in others relative success. I think it must be accepted that the root cause of distemper is an ultra-microscopic virus. I believe the selective habitat of the virus is the blood stream, and that every organ and tissue comes directly under its influence, but I do not look upon it, or the poisons it elaborates, as belonging to the highly aggressive type, although I am prepared to admit that it gains in aggressivity as it passes from animal to animal, thereby accounting for epidemics. For the fatal issues following distemper one must credit the bacterial flora belonging to the secondary infections, and if we could take our patients in hand at the first rigor and place them under ideal hygienic and dietetic conditions, we should rob distemper of its sting. Practical experience teaches us this. I would go even further and suggest that *true* distemper in itself is a *benign* disease.

Mr. Dawes considers that the nervous phenomena are due to the *virus* of distemper. I incline to the belief they are caused by the toxins of the secondary infections. One must look upon these as the end phases of the disease when an advanced toxæmia has taken place, producing gross lesions in the higher nerve centres.

Mr. Hughes prefers to allow the animal to follow its own inclinations and seek darkness, but surely in the light of scientific knowledge and the anti-microbic value of the ultra-violet rays—not to speak of their value in assisting the metabolic functions—this is unwise.

Mr. Elphick makes a pertinent observation which, among clinicians, is not recognised as much as it should be. He says: "The skin and the bowels are one." He might have added, with equal truth, the respiratory mucosæ. The mucous membranes are the specialized internal continuations of the external integument, whose functionings are in close unison, so that what affects the one reflexly affects the other. Clinically we often notice this, although we may not stop to interpret the inward meaning of nature's workings. Nettlerash is a good example. In immunological work I look upon these tenets as of great value, and in prophylactic and curative vaccination I requisition the skin in many cases by carrying out at the same time cutaneous as well as subcutaneous vaccination.

I think everyone will agree with Professor Wooldridge that it is the secondary infections that account for the complications and fatalities, and this brings me to the vital question why does distemper show so many phases?

The health index of an animal is a continually varying quantum, largely due to climatic, dietetic, and metabolic changes, and whichever factor predominates so will one get, generally speaking, the particular phase. The virus of distemper in itself lowers the health standard to such an extent that the body saprophytes tend to become parasites, and whichever group is in the ascendent so shall we have the particular type of complication. Thus, I would suggest when the *B. coli* group are in the ascendent we get the hepato-enteric type; the broncho-septicus, the respiratory group class; while the streptoccocal flora functions in a more general manner, aiding the one or the other, or acting independently. There is another connection with distemper, and that is *phleomorphism*. This is a speculative factor which I commend to the researcher. I do not agree with Professor Wooldridge when he says "if you have an animal in the incubative stage you are in for danger of producing a climax if you use a vaccine." Should such a condition take place, it is quite clear his dose is too large. My practice in those cases which I consider are heavily charged with bacteria and their toxins, is to give an anti-serum, followed by a minimum dose of vaccine, and watch for the negative phase. Major Hobday prefers those old-fashioned types with a *good* discharge from the eyes and nose. This clinical observation is quite in line with modern immunological findings,

(*Continued at foot of next column.*)

Abortion and Malta Fever.

"The question as to whether the bacillus of contagious abortion in cattle and other stock (*B. abortus* of Bang) and the bacillus of Malta fever in man (*B. melitensis*) were one and the same causative organism, was considered in a paper read by Mr. L. E. W. Bevan, Director of Veterinary Research, Southern Rhodesia, at a meeting of the Southern Rhodesia Veterinary Association in November, 1921.

"It had long been suspected in various parts of the world that some such affinity did exist, that the causative organism was either identical or of a similar strain, for the agglutination test gave similar reactions. Various authorities for this view were quoted by Mr. Bevan in the course of his lecture, and his own observations and experience tended to support the theory, that the germ of epizootic abortion was pathogenic to man, but in the latter case taking the form of Malta fever. On no other grounds could various cases of the latter disease be accounted for. They occurred in districts where there had been outbreaks of contagious abortion, and the victims were known to have drunk the milk from cows running with infected herds. To assign the cause to goats—generally supposed to be the conveyors—was impossible, because there were no goats in the neighbourhood, much less had the sufferers ever drank any goats' milk. Nevertheless there were puzzling factors in the matters that prevented definite conclusions being drawn. For instance, it was rare to find more than a single member of a family being attacked although all had been using the milk from the same herd. Mr. Bevan, however, considered the matter of great importance in relation not only to the stockowner's but the human point of view, and he appealed to members of the medical profession who had been specially invited to attend the lecture, to co-operate with the veterinary profession in investigating the matter and applying the usual tests in cases of human infection brought to their notice.

"The importance of the subject from the human point of view lies in the fact that if Malta fever is a disease not spread only by goats but by cattle as well, and that if Malta fever in goats and contagious abortion in cattle are one and the same thing, even if differing somewhat in form, then the conclusion must be drawn that human beings are just as liable to contract Malta fever in districts where contagious abortion is endemic, as they would be if living in a land where the goats were infected with *B. melitensis*.

"A characteristic of both forms of the disease is abortion, a danger which also extends to the human being, and it is therefore quite apparent that the matter, in the light of the ascertained facts, does assume a position of great importance from the public health point of view.

(*Continued from previous column.*)

for the discharge, if copious, shows that nature is coping successfully with the bacterial invasion, that phagocytosis is working under high pressure, and in proportional ratio the bacterial elements are being eliminated. *Per contra*, if there is little or no discharge, the protective mechanism has broken down the bacterial content is rising, and the bacteria are "housing" themselves in some vital organ or organs, culminating in gross lesions which often lead to the death of the host.

"The reason for again referring to the matter in these columns is that we have been favoured with copies of two issues of 'Public Health Reports,' (the title of weekly reports issued by the United States Public Health Service), in which this particular subject is referred to. One of the leading authorities quoted by Mr. Bevan in his lecture was 'Evans'—just plain Evans, who, it appears, is a lady, a Miss Alice C. Evans, holding the post of Associate Bacteriologist, Hygienic Laboratory, U.S. Public Health Service, and it is this lady, who, in the publication just referred to has contributed the result of further investigations into the subject. These contributions are of a very technical nature, dealing as they do with technique of highly specialised methods that have to be adopted in this particular branch of bacteriological inquiry. The general effect, however, can be summarised in a few words.

"Miss Evans' first paper refers briefly to an experiment carried out for the purpose of showing the relationship between the *B. melitensis* of Malta fever and *B. abortus* of contagious abortion. A pregnant heifer was inoculated intravenously with *B. melitensis* on February 9th, 1923, the culture being a strain isolated in September the previous year from the blood of a human case of Malta fever which had occurred during an epidemic in Arizona. On March 26th, 1923, the heifer aborted a fœtus of about five and a half months. *B. melitensis* was recovered from the stomach contents, and other parts and from the colostrum. The recovered strain was serologically identical with the strain used for inoculation, which is unmistakably distinguishable by the usual test from typical *B. abortus*. Finally, we are told that the results of the experiment were similar to those which would have been expected if the inoculation had been made with a virulent strain of *B. abortus* of bovine origin.

"In the next paper on the subject (Public Health report of March 14th, 1924), Miss Evans enters very fully into the history of the investigations concerning the identity of the diseases in question. This contribution bears more particularly on the subject in relation to human health, the author pointing out that ever since it has been known that the causal organism of infectious abortion in cattle is of common occurrence in cows' milk, the question has been raised from time to time as to what effect the germ may have on human health. The question became more emphatic when it was established that Bang's "*Bacillus abortus*" and the "*Micrococcus miliensis*" of Bruce are so closely related that strains from bovine and caprine sources are now considered to be the same bacterial species. The article concludes with citing a case where Malta fever was endemic among human beings, but where there was no possibility of the patient whose case was studied having contracted the infection from goats, but who had been in the habit of drinking raw cows' milk.

"From a scientific point of view, even with all the evidence cited, it cannot be taken as positively proved that the two diseases—contagious abortion in cattle and Malta fever in goats and human beings—are exactly the same, but there is no doubt as to their affinity, and it is quite clear that stockowners, especially of dairy cattle, have a double incentive for keeping their herd free of infection from contagious abortion. There is the incentive that centres on the welfare and increase of their herds, and the more important incentive that attaches to their own personal health and of that of their dependants and their customers. In the latter connection the matter is sooner or later bound to assume a serious aspect in the eyes of the medical officers of health of the various cities, and who, as in the case of tuberculous infection, will doubtless feel called upon to adopt such precautions as may be deemed necessary for the protection of the health of those whose interests they have been appointed to guard."—*The Farmers' Weekly*, Bloemfontein.

The Veterinary Record.

28th February, 1925.

IRELAND.

For some years now we have almost become accustomed to hearing very little of the progress of veterinary affairs in Ireland: that is to say, of course, very little *in public*. In personal conversation, and in correspondence, we hear a good deal, and it is pleasant to be able to record the good feeling and expressions of goodwill which pass between the members of the one profession belonging to the two nations. So much trouble has occurred in the past, that it becomes no one openly to express opinions which, quite innocently, may cause further misunderstanding. Irish affairs have, for good reason, remained a closed book so far as this journal is concerned. Nevertheless, we cannot forget that the Association is very sensible that one of its four branches covers the members of our profession in our sister isle and that Ireland takes, with Great Britain, her share in our title. The other three branches cannot remain apathetic to the condition and well-being of the fourth, and the whole Association must always be anxious at all times that one of its principal assets should prosper. None can be beset with difficulties without the remainder feeling the effect—for, after all, we are one profession and no matter what the future may hold in store, we cannot forget the past and the bond of brotherhood which was forged at our graduation and has been strengthened in after years by personal friendship and esteem. We hope that our fellow members in the Free State will realise that our silence does not mean forgetfulness, but rather that we desire above all things to avoid any possible appearance of interfering in matters which are not our concern. And we would wish them to understand that now, as always, they have our very sincere sympathy and our good wishes for the future, when we feel sure that all will come right again, as in the old fairy stories of our childhood.

From Northern Ireland a little more news percolates by degrees, and such as comes to us is all good. Ulster is making great efforts to promote sound legislation and become a model State. So far as agriculture and the diseases of animals are concerned, progress seems to be on very sound lines. We read that the value of exported cattle in 1923 was £5,000,000 and that there were in the province about 750,000 cattle, over 500,000 sheep, 200,000 pigs, 60,000 goats,

and 3,500,000 poultry, which shows that the capital invested in stock is very considerable. The Imperial Secretary's Department and the Ministry of Agriculture have taken steps to safeguard the health of this stock so far as possible, and they appear to us to be acting on very sound principles. We understand that there may be provision for a regular veterinary administration with county and district organisation under the Ministry of Agriculture, linked up with the medical side of the Ministry of Home Affairs in those services which should be co-ordinated. We wish we could see such an administration in England linking the services under the Ministry of Agriculture and the Ministry of Health. In Ulster research laboratories have been set up and a great deal of attention is being paid to agricultural education, both at school, university, and also by popular lectures. Close co-operation exists between the Animal Institution, Poultry and Animal Diseases Divisions, and this co-operation should be of the greatest value to the farmer and stock-owner. The Government of Northern Ireland must be congratulated on its policy and on the way this policy is being carried out. For our own profession, we see in these measures great hope for the future, in that the public, and farmers in particular, will rapidly learn how to make intelligent use of the skill and knowledge of the veterinary surgeon, and that conesquently our profession will eventually become not only highly esteemed but comfortably prosperous and so make up for the difficult times through which it has been passing during the last few years.

Importation of Pedigree Animals.

Mr. E. Wood, Minister of Agriculture (Ripon, U.), moved the second reading of the Importation of Pedigree Animals Bill in the House last week. The purpose of the Bill was to carry out one of the resolutions passed at the Imperial Economic Conference, 1923, to the effect that steps should be taken to encourage Inter-Imperial trade in pedigree stock throughout the Empire in reciprocal terms, provided always that precautions were taken against the introduction of disease. The Bill incidentally cleared up a point left in doubt by the Act of 1922, which made provision for the importation of Canadian store cattle. Under that Act it was provided that further provision for the admission of cattle should be made by Order of the Minister. The matter was brought before the Imperial Economic Conference and a resolution accepted. The Bill gave effect to that resolution with necessary consequential alterations. The Bill had the support of the farmers' organizations and the breed societies. It had nothing to do with the controversy on Canadian cattle. It was only concerned with pedigree cattle. It gave a general power for the importation of pedigree animals where the Minister was satisfied that they were pedigree animals, and that there was no risk of disease.

The Bill was read a second time.

CLINICAL AND CASE REPORTS.

Compound Fracture of the Tibia.

By W. Burke McAleer, M.R.C.V.S.,
Hexham-on-Tyne.

Subject.—A Welsh pony, 9 or 10 years old.

One morning, while acting as *locum tenens* in a practice in the south of Scotland, I was requested to visit a pony which, I was told, had cut its leg. All attempts to get the animal to walk proved of no avail, the foot of the injured leg being held suspended fully 9 or 10 inches from the ground.

It being a busy time of year and having what I thought to be a few more urgent cases on hand, I arrived there, a few hours later, to find a pony with a lacerated wound on the antero-internal aspect of the upper third of the gaskin. The only other occupant of the field was an animal of the cart horse type.

On stooping to examine the wound, the leg was flexed even more in an attempt to draw it from me, when I heard a fairly audible click. I then listened with my ear pressed tightly against the thigh, and on manipulating the leg with my hand, I was able to detect a distinct crepitus. My diagnosis was further confirmed when, on moving the foot of the injured leg from side to side, I could palpate on the inside, where the bone is uncovered by muscle, a slight movement at the seat of the fracture.

From an examination of the leg, the wound seemed to have been caused by a more or less glancing blow, very probably by a kick from the horse which was grazing close at hand. The injury to the bone must have been inflicted when the foot first touched the leg, as the skin on this part was merely scarred, whilst 3 or 4 inches above where the movement and crepitus could be detected a piece of skin had been completely excised. I attempted to get the foot to the ground to see if any weight could be borne, but without success, the act of locomotion being performed on three legs.

The owner, a very wealthy lady, asked me what my prognosis was. I assured her it was very unfavourable. She insisted that some attempt should be made to effect a cure, and led me to understand that she wanted the pony treated, regardless of cost, as it was a great favourite.

Thinking this rather a rare opportunity, I at once commenced to get the animal under cover. Fortunately there was a cattle float, in the neighbourhood, which had a detachable door both behind and in front. Having procured this, and with the assistance of a few men, the patient, which was not a very heavy proposition, was quietly assisted into the float and taken to a stable. The float horse was unharnessed, and the shafts pushed a few feet through the doorway, when the front side of the vehicle was lowered and the pony was practically carried by means of a strong

sheet, placed under the abdomen, to the nearest stall. The stall was partitioned off to allow of as little side to side movement as possible on the part of the pony.

Having cleaned and dressed the wound, two or three ply of soft bandage were wound round the leg from the hoofhead upwards to the edge of the wound. Over this was placed a stout splint, measured and designed by a local carpenter, to fit exactly into the curvature of the hock and prevent flexion. It took some time to get the leg fully extended and the splint *in situ*. The splint was then fixed with tape and strips of plaster and over all an elastic bandage was bound tightly, beginning at the foot.

Since a proper set of slings was not at hand, a temporary set had to be improvised. A hole was bored in the floor of a hay loft, which over-ran the stable, and on this floor were placed two strong wooden posts, at right angles to the supporting beams of the floor of the loft. Round these posts two chain cart back bands were tied, and allowed to hang over the pony in the stall. A sheet, made from two swingletrees, sewn into two strong seed bags, was attached by a thick rope, passed through the eyelets, to the chains suspended from the roof. A breast band and fillet string having been attached to the ends of the swingle trees, the whole was adjusted to relieve the body weight. This conglomeration of scrap served admirably as slings, and, if anything, was more easily and with less discomfort to the patient, altered when required. A piece of waterproof material was placed below the wound and over the bandage to allow of an easy disposal of pus, etc.

The remainder of the treatment consisted of a dose of aperient medicine internally and in dressing the wound twice daily with suitable antiseptics. The wound was practically healed in about 10 or 12 days, and at the end of a month or five weeks, the slings, together with the splint, were removed, an elastic bandage being allowed to remain on the leg for about another week. The only trouble encountered during the treatment was mainly due to neglect on the part of the attendant to keep the waterproof in position, and prevent the discharge from the wound getting down between the bandage and the leg. I am indebted to the practitioner for whom I was acting as locum tenens, for many of the particulars, as he very kindly took over the case and carried out the latter part of the treatment. I understand the cure was complete, except that the pony developed a slight foot trouble in the opposite hind foot, through standing so long in the same position.

While on the subject of bone fractures, I should like to ask a question which has often troubled me, and which might interest some of the other members—is there any sensation in bone ?

If a portion of the tissues covering any bone were removed and an instrument inserted into the compact or cancellated tissue of that bone, would the animal experience any pain ? If so, where are the sensory nerve endings to be found ?

Partial Dislocation of the Neck and its Treatment.

By Wm. Caudwell, F.R.C.V.S.

I beg to thank Major General Sir Frederick Smith for his notes on the very interesting case of dislocation of the neck, which appeared in the *Veterinary Record* on the 17th ultimo, as it calls to mind some cases of my own. My first occurred over thirty years ago and the accident had happened some days before I saw it. The horse had got cast in his stall and was unable to rise. On examination I discovered a partial dislocation about the middle of the neck. I raised the animal in slings and attempted to support and keep his neck straight with wooden splints, but my efforts failed lamentably and the animal was subsequently destroyed. This caused me to reflect very seriously upon what method I could adopt with a fair chance of success in the treatment of future cases and I will now describe the method I evolved. My next case was a horse (the property of a corn dealer) tbat had got his heel entangled in the head-stall during the night and was found lying on his off side in his stall. I noticed in the middle of the neck on the near side a deep concavity, and a considerable bulge on the opposite side. I raised him from the floor with slings and placed him near the partition on the offside of his stall, then secured his head to the said partition short enough to limit the movements of his head and keep it in alignment with his body, but sufficiently long to enable him to feed near the end of the manger. I then had a strong pole let into the floor and fixed to the ceiling above in a vertical position near his left hind quarter and posterior to the hip, also with a view to restrict his movements and keep him near the offside partition. The next thing was to reduce the dislocation and keep it reduced, and with this object in view I adopted the following method. I procured a strong corn sack and firmly tied to each end of it a strong cord about three yards long, then, having placed one end of the sack over the neck, the upper cord was tied to a staple driven into the wall on the near side of the stall and the lower cord to a staple about three feet from the floor in a vertical line with the one above it, to give the exact tension required to keep the dislocation reduced without pressing on the trachea. The sides of the sack were neatly folded over in an outward direction, leaving it sufficiently wide to cover a surface of ten or twelve inches over the seat of the injury. The head-stall had to be padded and the lower jaw guarded against injury from pressure on the rung of the manger. Daily attention was needed at first to see that the sack was kept nicely adjusted and the proper amount of tension maintained over the seat of injury to keep the neck in a straight line with the body. This horse made a good recovery and resumed work within a few weeks, apparently none the worse for the accident and no evidence of the injury remained. I have treated similar cases since the above with equally satisfactory results. The animal must of course be kept in slings until he has fully recovered.

In a case when the dislocation could not be reduced by gentle means, I would place the animal under chloroform anæsthesia while he is lying on the ground and then employ forcible extension of the neck while endeavouring to manipulate the bones into their normal position. I would strongly deprecate the practice of jumping on the neck if it could possibly be avoided, as I doubt its efficacy, while it would increase the animal's suffering.

Rupture of the Pericardium in the Horse due to Fright.

By A. C. Wilson, M.R.C.V.S.

Wallis Hoare's *System of Veterinary Medicine* states that this is a very rare lesion and that the recorded cases were probably due to violent blows or injuries in the cardiac region. I am convinced I have had two cases recently due to fright and not to injuries.

Case No. 1.—A milkman's cob was suddenly startled by a train crossing a bridge over a road. The cob ran away for about 200 yards and then dropped dead. I made a *post-mortem* examination for an insurance company and found a rent in the pericardium about six inches long. I think this rent was caused by the horse suddenly jumping to one side when it was frightened, and was not due to the fall when death took place.

Case No. 2.—This case occurred on the evening of November 5th last year, and although, unfortunately, I did not make a *post-mortem* myself, I feel sure, from the owner's description, that this also was a case of "rupture of the pericardium." On arrival, in response to an urgent telephone message, I found a strong black cob standing in a field looking very distressed and sweating profusely. The pulse was very jerky and fast, and the heart-beats, which could be felt considerably behind the cardiac region, were tumultuous and very violent. The owner told me that the cob was suddenly frightened by fireworks while at the railway station about a mile away. He first jumped violently to one side, and then his head shook agitatedly as though he was in a fit. He was brought home with some difficulty and when there had several more attacks of giddiness, in addition to the profuse sweating. Remembering my previous case and judging from the violent action of the heart, etc., I diagnosed "rupture of the pericardium." As fireworks were going off all around, I recommended that the animal should be taken to a shed and kept as quiet as possible. I did not administer any medicine, and told the owner not to attempt to pour anything down, as the animal would probably drop dead if he attempted to raise his head high enough for drenching. I saw the cob next morning and found him looking fairly well. The sweating had ceased, the pulse was slower, and the heart-beats more normal; he had also eaten a bran mash. Soon after I had left the previous evening he had another severe attack of giddiness, and the owner, in spite of

(Continued at foot of next column)

DIVISIONAL REPORT.

Central Division.

A well attended meeting of this division was held at 10 Red Lion Square, W.C. 1., on Thursday, February 5th, 1925, the President, Major P. J. Simpson in the Chair. The attendance book was also signed by Messrs. Andrew, Balls, Bell, Brown, Bryden, Davenport, Doyle, Dunkin, Eardley, Foreman, Heath, Jones, H. C. P. King, H. S. King, W. S. King, Kirk, Langford, Livesey, Martin, McCunn, McIntosh, Sir John Moore, Mulvey, Perryman, Rees-Mogg, Rowe, C. H. Sheather, S. H. Slocock, Smith, Stroud, Thompson, J. Willett, Williams, Winter, Wright and Young.

Visitors: Messrs. Clarke and Pickup.

At the outset of the proceedings the President said that he wished to make an announcement which he was sure would be received by all with sadness and that was that the caretaker of the College, Mrs. Aldridge, who had lived in that building for so many years and who was in consequence so familiar a figure to many of them, had died two days previously. Mrs. Aldrdge, had been for so long a faithful servant of the College and of the Society, that he was sure they would wish to record their sorrow and sympathy with the relatives in the customary manner. The meeting having responded, the President informed the meeting that as the result of the death of the caretaker the minute book was not at the moment available.

It was agreed that the minutes, which had been published in the *Record*, should be inserted in the minute book and signed as correct by the President when the book should be found.

Apologies: Messrs. Coleman, Macdonald (Hon. Secretary, for whom Captain T. L. Wright officiated *pro. tem.*), Roberts, Captain S. L. Slocock, and Messrs. A. E. and F. Willett.

The meeting passed a vote of sympathy with Professor Wooldridge in his severe illness and expressed the earnest hope that he would be speedily restored to health.

(Continued from previous column.)

my advice, had drenched him with half a pint of whisky. On the following Monday (November 10th) the owner informed me that the cob suddenly reeled and dropped down dead on the evening of November 7th, exactly 48 hours after he was taken ill. He opened the animal and found a rent in the pericardium about five inches long and a large clot of blood in front of the heart (probably arising from a ruptured aorta). I think the chief diagnostic symptom of this complaint, apart from the tumultuous nature of the heart beat, is that it can be felt six or seven inches behind the usual cardiac region. The profuse sweating also assists the diagnosis when abdominal symptoms of any kind are absent. I thought it would be interesting to record these two cases somewhat fully, as apparently "rupture of the pericardium" is a very rare lesion.

Correspondence: A letter from the Royal Veterinary College (London) Student's Union, thanking the Division for its notification that the presence of final year students would be welcomed at meetings of the Division. A letter from the Secretary of the N.V.M.A., acknowledging with thanks the receipt of the letter of good wishes for the year, which had been sent by the Secretary of the Division.

New Fellows: Nominations: Messrs. E. L. Clarke and J. Pickup. Elections: Messrs. E. C. Lloyd (London), J. Stephens (London), and Captain T. L. Whitby (Chelmsford) were elected Fellows.

Hon. Fellow: Captain Ross Grant.

MORBID SPECIMENS.

Mr. J. D. WILLIAMS: I have here the head of a young goat. This goat is the second of two, mother and daughter, the head of the first of which I sent to Professor Wooldridge, who passed the opinion that it was a case of osteoporosis. That was about a month ago. A few days ago the owner came in and said that the second goat was showing similar symptoms, being unable to masticate. I found that it was so and advised slaughter. If you examine this specimen, the fibrous tissue replacing the bone will be very clearly seen and the teeth will be observed to be loose; in fact the animal was so bad that it could not eat at all. I must admit that in the first case I did not diagnose osteoporosis; I thought it might be actinomycosis and treated it accordingly.

Mr. L. S. BALLS: I have here a very large prostate gland from a fox terrier dog, thirteen years old. You could distinctly feel this gland while the animal was alive. No operation was performed and the dog lived for six months. On *post mortem* I removed the gland, and, as you will see, it was of great size. There was no retention of urine and that was the peculiar feature of the case.

Captain C. DAVENPORT: This is the fractured pelvis of a horse. It is particularly interesting to note the number of pieces into which it is broken. The case should have been exhibited by Captain Peatt, but as he is unable to be present, he has asked me to read the following notes on the case.

Subject:—A clean-bred mare, six years old; an officer's charger.

History and Symptoms:—Whilst playing about in her box the mare was seen to fall heavily on the off side. She regained her feet without much trouble and it was then noticed that the off leg was being carried and that the animal was in great pain, *e.g.*, blowing with anxious expression and perspiring freely.

A fracture was suspected, but no crepitus could be detected although the leg was moved in all directions, the patient objecting strongly, particularly when the leg was moved in an antero-posterior direction.

As the sling box was thirty or forty yards away and the animal showed a marked disinclination to move, it was decided to let her remain where she was.

Treatment consisted in hot fomentations to the affected quarter and the administration of chloral hydrate 1 oz. in ball.

On the following day the patient had settled down and had a normal pulse, temperature and appetite and was seen by me to rest the sound limb and place her weight on the affected one. If forced to move she hopped on the near hind leg apparently without much inconvenience. Still no crepitus could be detected but heat and pain over the hip joint were evinced. No rectal or vaginal examination was made owing to the excitement caused in the patient.

On the third day the mare was assisted to walk quietly to the sling box along a littered path and was placed in the slings without mishap.

She had been standing quietly in the slings eating hay for about fifteen minutes, when she sat down in the breeching apparently to rest. Immediately the animal became greatly excited, struggling, sweating, straining violently and groaning with pain. The slings were removed at once and the mare threw herself down and gradually became easier. Hæmorrhage from the vulva was in evidence and on moving the off-hind limb distinct crepitus could be felt and heard over the hip joint. An attempt at vaginal examination caused a return of the straining and was not persisted in. Gr. vi. morphine tartrate were given hypodermically, after which the patient became quiet.

Two hours later the animal was still easy and had taken some gruel and eaten hay.

After another examination I decided that the case was hopeless, but before destruction could be carried out the mare gave a last struggle and died.

Post Mortem:—The abdominal wall was infiltrated with blood and both the pelvis and abdominal cavities contained a large quantity of free blood.

The following main fractures were found affecting the right half of the innominate bone:—

(*a*) Shaft of the ilium.
(*b*) Acetabulum in three pieces.
(*c*) The symphisis pubis.
(*d*) Os pubis.
(*e*) Ischium, where it bounds the obturator foramen

One long spicule of bone, part of the shaft of the ilium had penetrated the abdominal wall and caused considerable damage, being the chief cause of the internal hæmorrhage. Another sharp piece of bone, part of the pubis, had caused laceration of the pelvic contents.

The muscles and vessels in the vicinity of the fractures were greatly damaged, in some places the former resembling mince meat.

Observations:—Death was apparently caused by shock and internal hæmorrhage. It would appear that displacement of the fractured bones did not occur until the patient sat down in the slings.

It is interesting to note, firstly, that a simple fall in the stable could cause such a condition, and, secondly, that the animal could bear weight on the affected limb before displacement took place.

Captain DUNLOP MARTIN: I wish to exhibit the ovaries and horns of the uterus of a two year old cross-bred spaniel retriever bitch, which I removed a few days ago. The animal's history was that it was very irritable and for some time had been in a state of

sub-acute heat. The horns of the uterus, seemed, on manipulation, to be much larger than they should have been and I advised ovariotomy. The condition of the ovaries is to me unique. They are both very much congested and they have preserved their colour very well. I propose to get a section made of them, because I do not understand what the condition is, but evidently there must have been considerable irritation there.

Captain F. WINTER: This specimen is a pebble I removed from a small bitch. It was found within eighteen inches of the rectum, and anterior to that was a long mass of gravel. The animal was *in extremis* when brought to me, and the pebble was firmly adherent to the walls of the bowel.

Captain Winter showed two photographs of a horse which had been castrated by a "quack." There had, he was told, been tremendous swelling, but at the time when CaptainWinter saw the animal (a month after the operation) none about the region of the sheath, but the veins along the flanks and in between the thighs were all corded and there was much phlebitis. They had been filled with cheesy material, which eventually became broken down. He could only conclude that the condition produced was a septicæmia of some sort. The animal was in a bad condition altogether, and there must have been acute nephritis, as diabetes was present. The castrator had removed the clams, but in dressing the wounds had not taken proper antiseptic precautions. The speaker had kept the animal alive with hypodermic injections for three days, when he had to stop, as the insertion of a needle inevitably led to abscess formation. However, the horse eventually recovered, even the diabetes disappearing.

Captain H. KIRK: I had a miniature Pomeranian brought to me this week, the owner informing me that it had something the matter with its off-fore leg. I examined it and found it was fractured. A veterinary surgeon had diagnosed dislocation and the fracture was imperfectly set. I have here two X-ray photographs which reveal the bones to be obviously out of line. I want to ask the opinion of those veterinary surgeons here who engage in canine practice as to whether they think it would be a feasible thing to do, to break the leg again and re-set. The radius and ulna are fractured.

A MEMBER spoke to having a similar case in a small dog five months old that had fractured both forearms. He broke the bones and re-set them, and the animal made a complete and satisfactory recovery. He would have no hesitation in doing the same in the case presented by Captain Kirk.

Mr. WILLIAMS: I remember seeing an operation in a case of that kind—I think it was a broken radius—probably the ulna as well. A saw was used and a piece of the ulna cut out. It was a very successful operation and straightened the leg completely.

Mr. MULVEY spoke to the advantage of breaking the incorrectly united bones by means of the exertion of gradual pressure. If they took hold of the bones above and below the fracture, they would almost invariably break them above and below the seat of injury. To achieve a break at the desired spot (the original seat of injury) steady pressure should be applied there in drawing the bones up to a splint.

Colonel YOUNG: Did our friend who brought along the goat's head make a *post mortem* examination of the other bones of the carcass? The nasal and maxillary bones are often very easily cut into, and examination of the ribs and other bones might have furnished further and even more reliable evidence of the presence or absence of osteoporosis.

Captain Davenport's case is very interesting, and it is interesting also to note how it is possible for horses to sustain such an injury and yet to cover a considerable amount of ground. I was in training at Okehampton and a horse ran away and was thrown down. He rose and walked a quarter of a mile, but on examining him, diagnosis of broken pelvis was made and we sent him to the kennels. I went down and found just such a condition as is observable in the specimen exhibited by Captain Davenport. It was extraordinary that the horse should have walked so far.

Mr. WILLIAMS: I made an examination of the rest of the goat's carcass, and the ribs and vertebræ appeared to be normal. In the first case, however, the condyles of the occipital bone and the articular surfaces of the axis appeared to be very much eroded and very soft. I think that was what probably led Professor Wooldridge to the conclusion that the case was one of osteoporosis.

Major MULVEY asked Mr. Winter if he did not attribute the enormous amount of swelling in the case of the horse to the use by the "quack" of too much or too caustic a dressing. Mr. Winter replied that when he saw the horse the clams had, of course, been removed, and he did not know what dressing had been used.

Colonel YOUNG thought Mr. Winter deserved great credit for his cure, but he would very respectfully doubt that the animal had diabetes, for if one met with a bad attack of that disease it was absolutely incurable.

The PRESIDENT thanked those Fellows who had favoured the meeting with such interesting specimens.

Mr. J. WILLETT: There is one other matter to which notice should be accorded this evening. This is the twenty-fifth anniversary of the year in which our esteemed Honorary Treasurer, Mr. Stroud, accepted office in this Society. This is both the month and the day and I felt we should not allow the occasion to pass without reference to this anniversary, denoting as it does so long a record of faithful and successful service by Mr. Stroud, first in the capacity of Hon. Secretary and later in his present office as Hon. Treasurer.

The announcement was received with enthusiasm, and Mr. Stroud in reply, thanked the Fellows for congratulating him upon the anniversary. It was in February 1900, that he was elected Secretary of the Society, in succession to Mr. Mulvey, and he had had the honour and pleasure of being an officer ever since. It had been a great pleasure to him to do all he could

(Continued at foot of first column next page.)

NOTES AND NEWS.

The Editor will be glad to receive items of professional interest in these columns.

Diary of Events.

Feb. 28th—Annual Meeting of the North of England Division at Newcastle-on-Tyne.

Mar. 5th—Meeting of the Central Division at 10 Red Lion Square, W.C.1.

Mar. 6th—Annual Meeting and Dinner of the Lancashire Division at Manchester.

We unite with the followers of the human branch of medicine in mourning the loss, by sudden death, which occurred at Cambridge on Saturday night, of Sir Clifford Allbutt, Regius Professor of Physic at that University. The passing of "The Grand Old Man of British Medicine" removes one whom the Veterinary Profession will always remember with gratitude, not only for his service in producing the clinical thermometer, but for his enthusiastic support of the Comparative Section of the Royal Society of Medicine, of which, very appropriately, he was elected first President.

* * * *

Medical science has lost another pioneer this month in the death of Dr. E. E. Klein, who was one of the founders of bacteriology, a science which, as expressed by *The Times*, has not only revolutionised the theory of medicine, but has wholly altered the practice of surgery. Klein's work at the Brown Institute brought him to the fore, and it was as a Fellow of the Royal Society that he gave the evidence before the Royal Commission on Vivisection which excited so much adverse comment at the time.

Sir Arnold Theiler, Director of Veterinary Research in the South African Department of Agriculture, has placed his resignation in the hands of the Union Government.

(*Continued from previous page.*)

for the "Central," and whilst he had strength he hoped to continue. (Applause).

Captain T. L. Wright then read a paper on "Cases met with among Polo Ponies," and an excellent discussion ensued. (Captain Wright's paper is produced, together with the discussion upon it, elsewhere in this issue—Ed.)

The meeting accorded the essayist a hearty vote of thanks and the meeting terminated with a similar vote to the President for his conduct in the Chair.

J. F. MACDONALD,
Hon. Secretary.

Royal College of Veterinary Surgeons.

OBITUARY.

MEYRICK, J. J., C.B., F.R.C.V.S., 45 The Chase, Clapham Common, S.W.4. Colonel (late A.V.D.). Graduated London, May 16th, 1855. Died February 14th, 1925. Aged 90 years.

DIXSON, E. L., M.R.C.V.S., 11 Grosvenor Place, Margate, Kent. Graduated London, April 2nd, 1878. Died 14th February, 1925. Aged 66 years.

HOYLAND, P. E., M.R.C.V.S., 20 Wharncliffe Street, Rotherham. Graduated London, July 16th, 1897 Died February 20th, 1925. Aged 50 years.

Colonel J. J. MEYRICK, C.B.

We regret to announce the death of Colonel J. J. Meyrick, C.B., late A.V.D., on the 14th inst., in his 91st year. He had just succeeded to the position of the "father of the profession."

The deceased officer served in Canada 1861-68, and for some years in India 1868-81, where he did good work in connection with the Horse-breeding Department. In 1882 he was appointed Principal Veterinary Surgeon to the Egyptian Expeditionary Force, for which he obtained a mention in Despatches, the 3rd Class Osmanieh and the C.B. This was the first decoration of the Bath conferred on a Veterinary Officer for service in the Field.

It is long since his retirement (1889), but until his sight failed him he took an active interest in local affairs. In his day he was a great game hunter and deadly shot: he was also an authority on sporting guns, rifles and ammunition, and for years competed at Wimbledon, and subsequently at Bisley. He was a man of decided literary and artistic tastes, and to the last of his long and honourable life maintained his interest in the Service and Profession.

The funeral took place on 19th inst. at Putney Vale Cemetery. The Army Veterinary Service was represented by Colonel F. W. Wilson, C.M.G., and the Royal College of Veterinary Surgeons by the President, Mr. S. H. Slocock, and Secretary, Mr. F. Bullock.

FOOT-AND-MOUTH DISEASE.

The Ministry of Agriculture announce that a fresh outbreak of foot-and-mouth disease was confirmed on Thursday of last week, on premises at Castle Bromwich, near Birmingham, the stock on two farms in the same occupation situated within a quarter of a mile of one another being affected. In one case ten cattle out of a total stock of twenty-three cattle and one pig were found diseased, two of the affected cows having been recently purchased. On the other premises seven of a total stock of eleven cattle were found affected. All these animals have been slaughtered. No definite information is available as to the origin of these outbreaks.

A further outbreak was also confirmed at Necton, near Swaffham, Norfolk. The total stock on the farm consists of twenty-three cattle, of which four bulls were found affected. These animals were brought on to the affected premises from another of the owner's farms on the 14th inst. Slaughter of all these animals is proceeding. There is no definite information at present as to the origin of the outbreak, which has occurred on premises which were the

scene of an outbreak in December last year. The possibility of there being a connexion between this and the previous outbreak is being investigated. A calf was sold recently from the affected premises to another farm, and steps are being taken to deal with the risk of the conveyance of infection by this animal.

The Ministry has made orders imposing restrictions on the movement of animals within a radius of about fifteen miles of the premises at Castle Bromwich and Necton.

Are Laurel Leaves Poisonous?

Do laurel leaves poison cattle? This question was argued before Judge Doyle, at Navan, in a case in which Mr. G. Carpenter, Mullafair, claimed £180 from Col. Holland, Drogheda, in connection with the deaths of six cattle, caused, he alleged by eating laurel leaves in a hedge separating their farms. Mr. T. Sherlock, Veterinary Surgeon, for plaintiff, said he examined an animal and found traces of laurel, which, in his opinion, caused death. Mr. A. Donnelly, M.R.C.V.S., stated he made a *post-mortem* examination of an animal and could find no trace of laurel leaves. It was a revelation to him to hear that such leaves were poisonous. Mr. Lyons, M.R.C.V.S. also said he had never read of laurel poison. Plaintiff's solicitor, however, produced Purdon's Almanac, which said that laurel was poisonous. Judge Doyle stated he was not satisfied that plaintiff had made out his case, and dismissed it.

A Handy Pocket Show List.

A handy pocket Show List, giving full particulars concerning some 350 English, Irish, Welsh and Scottish agricultural and fat stock shows and sales of pedigree live stock has just been issued by (Messrs. Vinton and Co., Ltd., 8 Breams Buildings, Chancery Lane. London, E.C.4), the proprietors of the Live Stock Journal. As well as giving the dates in chronological order, there is a list provided in alphabetical order. This, of course, makes for ready reference. Exhibitors and breeders of stock will find this publication of extreme usefulness. Published at 1s., post free, there should be quick sale of a most valuable booklet, which can be kept in the inside pocket of one's coat without any uncomfortable bulk being felt. The utmost care has been taken in compiling this Show List.

Device for Raising Fallen Horses.

"I noted in the December issue of the journal, as well as in an earlier issue, Dr. A. C. Wight's method of raising a horse. No doubt, Dr. Wight's method of fixing the rope about the horse's body is good. I have never tried it as I found a simpler method which I used in raising a 'downer.'

"As for the block and tackle, I don't own one, and if I did, it would always be loaned out. Furthermore, I usually find my cases of 'downers' in a barn or shed with low ceiling, with nothing above substantial enough to swing a horse on, and not infrequently the fallen animal is out in a pasture. But there are nearly always poles or scantlings at hand to make what we call a 'sweep pole,' which I have found to answer very satisfactorily. I should say that on an average farm I can rig up this apparatus and have a horse on its feet in an hour, and have to leave no equipment that I might never get back, except possibly a rope.

"I employ the following device: Two poles are crossed about seven feet from the butts and tied with chain at the cross in a fashion to form a fork with the ends of the poles. The poles so crossed are held in an upright position, slanting about one foot at the top, and are made secure in this position by nailing a strong scantling to each pole, about two feet from the cross and extending to the ground at an angle of about 45 degrees. These pieces prop the poles in position.

"A pole about 35 or 40 feet in length is placed in the fork, the large end foremost, extending six or seven feet past the fork. This end is notched and a wagon singletree tied to it. A three-fourths or one-inch rope is doubled and passed around the horse's body just back of the elbows and tied about the withers. Another rope is fixed the same way around the flank. These ropes are hooked on the singletree, and the horse is raised by several men pulling down on a rope tied to the long end of the long pole. When the horse is on his feet and steady, the rope at the end of the pole is fastened to a stake or other convenient object to secure it in position.

"Instead of using poles to make the apparatus, it may be made of pieces of lumber and scantlings to be found on the premises. A pole forked at the top and placed with the butt end in the ground like a fence post may be used instead of the two poles fixed to cross at the top to form a fulcrum; but it is not so conveniently moved from place to place in case the animal goes down again."

J. T. Alston, in Chicago *Veterinary Medicine*.

Erratum.

In the report of the Royal Counties Division Dinner at Reading, which appeared in last week's issue, the word "minimum" should read "maximum" in Mr. J. W. McIntosh's reference to the proposal to establish a Veterinary Research Council. The incorrect version read as follows: "Is it not reasonable and natural to expect that the proper constitution of a council of this kind would be of minimum value in an advisory capacity when matters applying to animal research and animal diseases are being considered?"

CORRESPONDENCE.

Letters to the Editor should reach the Office not later than by the first post on Tuesday morning for insertion in following Saturday's issue.

All correspondence must bear the name and address of the contributor for publication.

The Editor does not hold himself responsible for the opinions of his correspondents.

Alleged Lead Poisoning in Cattle.

To the Editor of The Veterinary Record.

Sir,—If a general response to Prof. Clough's invitation to discuss the above case were made by practitioners having experience of lead poisoning, I think the overwhelming concensus of such experience would prove acute poisoning to be far from rare amongst animals.

Prof. Dixon "emphasised that lead poisoning could not be acute." I have consulted several works on toxicology by medical men, and the authors are all at variance with his opinion. Let me quote from the 5th edition of *Forensic Medicine and Toxicology*, by J. Dixon Mame, M.D., F.R.C.P., and W. A. Brend, M.A., M.B., B.Sc.,

lecturer in toxicology at Charing Cross Hospital, as follows :

"Lead poisoning may be either acute or chronic. An intermediate sub-acute form is not unfrequently met with. Lead acetate is the most common salt taken, and if an ounce or more is taken, a strong astringent, metallic taste is at once perceived, followed by a feeling of constriction of the œsophagus, and a hot sensation which spreads to the stomach. Within half an haur after, vomiting comes on, the vomited matter consisting of white opaque masses which may be tinged with blood. There is great thirst, and violent colicky pains, which come on in paroxysms ; the abdominal muscles are tense, and the patient eases the pain by bending forward and compressing the abdomen."

Lesser records the case of a woman aged 40, who swallowed a 'knife pointful' of litharge in order to procure abortion. "In an hour and a half she vomited milk-like masses, and on the following day aborted a four month's fœtus. She became icterish, with abdominal pain, profoundly collapsed, and died on the third day after taking the poison." Prof. Dixon says that "Neither by direct, nor mechanical action, would lead or arsenic cause irritation of the lining of the stomach." If we are to take this sentence as it stands in the summary given by Prof. Clough, and if nothing in the context of the evidence given modifies, or alters its meaning, then it is indeed an extraordinary statement. Whatever may be said of the irritant or erosive character of lead as a poison, are not acute vomiting, diarrhœa and dysentery the constant symptoms of arsenical poisoning, and acute gastro-enteritis equally the classic *post-mortem* finding ? But let the Professor's medical confrères speak once more, and give the *post-mortem* appearances they find in *acute lead* poisoning :—"In addition to the usual indications of acute gastro-enteritis, the mucous membrane of the stomach has been found to be covered with a whitish-grey deposit : it may also be thickened and softened, a condition which sometimes extends to the duodenum. Erosions of the gastric and intestinal mucous membranes have been observed, apparently due to prolonged localised action of the lead salt."

The symptoms, and *post-mortem* appearances of the acute forms, as distinct from sub-acute or chronic, are vastly different. It seems to me that there is a weighty fallacy underlying the statements made as to the slow absorption of lead as a poison, in so far as they concern the question of whether acute lead poisoning occurs in man or animals.

Most of the lead salts used in the arts are either insoluble, or only slightly so, and in consequence absorption is slow, and only chronic cases result. But the point here is that, if a sufficiently poisonous dose is *taken*, voluntarily, or accidentally, acute and rapid results will follow with this, as with any other poison.

The effects of taking such doses of lead salts are so described in all the text books on toxicology, as in those cases I have quoted. The more soluble the salt taken, the more rapid the effect usually, but even this has to be qualified, because some of the insoluble salts such as the chromate, are even more active in sufficient doses than the soluble ones. I think it is most important to note that in cases of *acute* lead poisoning the dominant symptoms will be those of an irritant poison, and that many of the classic symptoms exhibiting the physiological nervous effects of lead may not be present, or well marked. The case is acute, and death occurs from gastro-enteritis, and before those symptoms peculiar to lead as seen in sub-acute and chronic form are well established.

Sane men do not usually *eat paint*, but if a decorator elects to eat out of his paint pot, instead of putting it on his job with a brush, does anyone doubt that neither "*pounds*" *nor ounces* would be necessary to produce acute poisoning ?

Well, *animals do eat paint*, and acute lead poisoning, ending in rapid death, has been recorded from this source hundreds of times. Presuming that in the case of these two cows analyses were made, and lead arsenate or its derivations were found in the organs, it is amazing to me that medical evidence so irrelevant to the cases known as they occur in the lower animals, should have been allowed to over-ride that of veterinary surgeons, who surely know something about it. As one who has made many *post-mortems* of animals dead from lead poisoning acute, sub-acute, and chronic, I beg to differ from the dictum of Prof. Dixon as to the *post-mortem* appearances, but being "only a Vet." I shall refer only to these as they occur in *animals*. In acute cases the evidence it that of acute gastro-enteritis, with injected mucous membranes, sometimes thickened, softened, and eroded, conditions, which sometimes extend to the intestines, and all being lesions consistent with the acute inflammatory action of a large dose of an irritant poison.

The black discoloration of the gastro-intestinal tract ascribed to lead poisoning, is by no means constant even in chronic or sub-acute cases, and is NEVER present in acute cases.

This discoloration is associated with the chronic and sub-acute cases, in which constipation and prolonged stasis of the bowels are symptoms.

In many sub-acute, and occasionally in chronic cases, however, the bowels act freely : diarrhœa may even be present, and in these no black discoloration is found. The dark colour is due, not only to the presence of lead sulphide, but also to reduction of the fæcal pigments during the periods of stasis, but if the bowels act normally, the black staining is not produced, the pigments and lead sulphide being evacuated freely. What constitutes acute, as contrasted with chronic poisoning, by any particular agent ? Here again Dr. Dixon has a dictum :—"death occurs within forty-eight hours, other cases he would describe as chronic." This is surely an academic and arbitrary definition. The case I have quoted as recorded by Lesser of acute poisoning by one dose of litharge, died on the third day. Would Dr. Dixon call that a chronic case ?

Again, is the act of death a *sine qua non* of acute poisoning, as distinct from chronic poisoning ? Many cases of poisoning from morphia, veronal, chloral hydrate and other drugs, have been recorded where the most characteristic, profound, and dangerous symptoms of the poison were present and yet recovery has taken place. Because they did not die were they cases of chronic poisoning ? Cases such as this constitute, to my mind, a grave challenge to the profession as a whole as to our competency to speak in a law court with knowledge and authority, within our own province. This is not the only occasion upon which veterinary evidence has been discounted, and treated as of no account, and it appears to be too often assumed that a medical man, as such, is a superior authority even on the diseases of animals, in virtue of his qualifications in human medicine—we still need to prove to some people that, "Every man to his trade," holds good with us.

This is a challenge we should always meet, and in this particular case it seems so flagrantly in the wrong that—always presuming that analyses were made with positive results—if a right of appeal exists, it should, to my mind, be made, and would be made, successfully.—Yours faithfully, EDWD. P. EDWARDS.

Mold.

"Grass Staggers" v. Acute Lead Poisoning.

TO THE EDITOR OF THE VETERINARY RECORD.

Sir,—I apologise for again troubling you, but it appears Mr. J. Kerr Calderwood is of the opinion that such a condition as "grass staggers" in cattle exists.

I purposely added that sentence to my letter of February 21st with the knowledge that some others think as Mr. Calderwood does, and also that more is to be gained from a discussion when different opinions are held.

Will Mr. Calderwood kindly oblige by giving his differential diagnosis between "grass staggers" and acute lead poisoning and what he considers the cause of "grass staggers" ?—Yours, etc., JOHN BROWN.

Invergordon.

Persistent Vomition in Cattle.

To the Editor of The Veterinary Record.

Sir,—I was much interested in the cases described by Capt. Collett in your last issue. I note what he and my old friend, Mr. Trewin have to say about cases of persistent vomition in cattle. I see a good deal of this phenomenon, and have long ago satisfied myself that, in a large majority of instances, it is due to impaction of the gastric groove by a bolus which is too large to negotiate. The obvious remedy is to pass the bovine stomach tube and flush the groove and thus remove the obstruction.

I commend this procedure to practitioners who encounter this condition. They will find it a speedy remedy in 90 per cent. of cases of vomition.—Yours faithfully, L. W. Wynn Lloyd.

Carnarvon,
February 23rd.

White Heifer Disease.

To the Editor of The Veterinary Record.

Sir,—I wish to thank Mr. C. Stinson for his lucid and practical contribution on white heifer disease, in to-day's *Record*, although I cannot agree with all his deductions.

A. "In the bulled heifer." I suppose he means what farmers in this neighbourhood call "over bulled," or "bulled through." I never attributed this condition to white heifer disease, and cannot say it occurs oftener in white coloured cattle, but it occurs more frequently after service by a young small bull. Also, it is found in animals that have had a calf.

Mr. Stinson says iodoform capsules put this right. The majority of cases die in spite of all treatment, whereas with white heifer disease I rarely lose one.

B. "Calving heifer."—I had a case recently in a white heifer showing all the signs of normal calving, but, as the herdsman said, "there was no road into her." It took some force to rupture this hymen, but, after giving an interval of ten minutes, the feet and nose appeared, and delivery was easy.

Treatment.—I have discarded the trocar and canula long ago, chiefly because of the difficulty of manipulating it in a narrow vagina, also because I had recurrence in a few cases. Now I use an ordinary thatch peg, preferably a hazel one of medium thickness, sharp at the point. It can be manipulated from without, with one hand in the vagina to guide to the right spot to pierce. This should be done at the same instant as the animal strains and renders tense the membrane. As it is withdrawn, have the finger ready to introduce into the opening, then tear the membrane well across.

Note. This is the first time I have heard of an animal breeding after an attack of white heifer disease. I have always advised clients to fatten off even valuable pedigree cattle. About twelve months ago I was called into a pedigree Shorthorn heifer, and found her with white heifer disease.

Some six weeks previously she was bought for 350 guineas under the hammer catalogued as having been served by a valuable bull, since exported at a long price. The heifer was not a good one in herself, but, as the owner said, he was buying the expected calf. I gave a certificate to the effect that the animal had never been in calf, and never would be. The owner wrote to the auctioneers, and also to the Secretary of the Shorthorn Society. The replies were much the same, both thinking he had no case against the seller. They asked him, "Could his veterinary surgeon prove that the heifer was not served on the date mentioned in the catalogue?" The case dropped, and the heifer made £30 through the local fat mart.—Yours faithfully, Wm. A. Campbell.

Boroughbridge,
February 14th, 1925.

Hints to Beginners.

To the Editor of The Veterinary Record.

Sir,—The excellent article entitled "Hints to Beginners," published in last week's *Veterinary Record*, reminds one that considerable discussion on this topic is always going on in the assistant world.

I feel that the article invites a reply from assistants, putting forward their point of view, to make clear the understanding which should, if possible, exist between principal and assistant. As one who has had some experience of an assistantship, I think that I am entitled to express an opinion.

Granted, there are different types of assistant seeking positions, but it must be remembered that they feel from the beginning that they have a social standing to keep up, and that they must recoup themselves for the time and money spent upon their education and special training.

Although the principal cannot be responsible for his assistant's action, nevertheless, at the beginning a little encouragement given by him will usually shorten the period in which he thinks his assistant is not much asset to his day book.

I feel sure that any shortcomings on the part of the assistant would then be more quickly rectified, provided that, at the same time, a firm hand was kept upon him.

The opinion formed later by the clients is of importance in enabling the principal to judge his man.—I am, Sir, yours faithfully, William Tweed.

The Mullan, Ballymoney,
16*th February*, 1925.

Liver Fluke in North Wales.

To the Editor of The Veterinary Record.

Sir,—Your issue of the 14th inst. contains a report taken from the *Denbigh Free Press*, of the remarks of Mr. R. F. Montgomerie, of Bangor, at a meeting of the Rhyl and District Branch of the N.F.U. I regret to find, however, that the report you published is incomplete.

From the report in the *Liverpool Daily Courier*, which I have sent you, I gather that Mr. Montgomerie did not content himself with informing the members of his audience that there was a remedy for fluke in sheep, but that he went so far as to deal with the retail price of the drug and its dosage.

We are given to understand that he stated that he had been assured of the co-operation of the veterinary surgeons in a certain area, but one wonders what is the opinion of the majority of the North Wales practitioners who, instead of being permitted to attend to the affected flocks and direct the treatment in the usual way—for male shield fern is not a new remedy in North Wales—are now likely to be deprived of this useful source of income.

But there is another serious issue. I was present last March at a meeting of the North Wales Division when we were assured that, acting under the terms of his appointment under the Ministry of Agriculture, the Veterinary Advisory Officer would not interfere with the ordinary practice of veterinary surgeons nor provide farmers with cheap advice. At Rhyl the farmers apparently were first informed how to treat their flocks, and afterwards advised "to consult their veterinary surgeons about him (Mr. Montgomerie) and his work."

I suggest that it would have been a wiser plan to have advised the farmers to consult their veterinary surgeons about their sheep.—I am, Sir, yours, etc., Howel V. Hughes.

Liverpool.

The Editor acknowledges the receipt of the following:—
Communications from Messrs. D. J. Anthony, B. DeVine, H. V. Hughes, O. Stinson, J. G. Wright and C. J. Peach.

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*Ref'ces.: Prof Lander in "Veterinary Toxicology," Prof. Froliner, Neumann's "Parasites of Animals," Prof. Cave in the "Agricultural Gazette," 7th November, 1924, also the Veterinary Adviser to the "Farm and Stockbreeder," in the issue of October 27th, 1924.